INSTRUCTIONS FOR CONSTRUCTION CONTRACTOR ENVIRONMENT, SAFETY AND HEALTH REQUIREMENTS

These instructions provide an overview of the Laboratory's Environment, Safety and Health (ES&H) expectations for contractors. The Laboratory's expectations include a set of requirements which assures that contractors have a complete and integrated ES&H program and that their program be aggressively implemented. The Laboratory requirements are detailed in Appendix A of the Argonne Terms and Conditions which is provided to the successful contractor. Appendix A includes the clause, "Environment, Safety and Health", which defines contractor ES&H requirements including the Laboratory's contractor disciplinary program.

Within ten days of award of the contract, the contractor must submit the following:

A. Contractor ES&H Program and Implementation Plan

A comprehensive safety plan addresses all of the hazards expected to be encountered in the performance of the proposed contract. The plan must address how the contractor will implement the plan, including the designation of competent and responsible personnel. Attachment No. 1 - ESH Program and Implementation Plan Guide, ESH-224 (4/99), is a guide the Laboratory uses to evaluate proposed plans and may be useful in developing your proposed plan.

B. Environmental Plan

If required by the project specifications, the successful Contractor shall submit an Environmental Plan which addresses the potential environmental impacts of this work.

a. If the work involves excavation, an erosion control plan will be required. This plan shall include the location and description of the area being excavated, the sewers, waterways, and roads to be protected, the erosion control measures to be installed, and a map of the area.

b. A description of the erosion control installation, maintenance and inspection procedures and schedules, and a plan for the removal of the erosion control measures should also be included.

C. Job Safety Analysis (JSA)

The JSA is a detailed analysis of the steps taken to complete each phase of the job, a detailed analysis of the hazards of each of those tasks and the mitigation actions that will be taken to eliminate or minimize the exposure to those hazards. Further information on preparation of a JSA is available from the National Safety Council and other professional safety organizations. Attachment 2 - Construction Job Safety Analysis, ESH 209C (9/99), is a form that can be used to document the JSA and the Contractor Safety Orientation.

D. Contractor ES&H Representative

This is the contractor's designated competent member of his organization responsible for the implementation of the contractor's ES&H Program on the Laboratory site. This member must have the authority to fulfill this responsibility and must be on site during the entire job.

The Laboratory will review and must approve the above submittals prior to the start of work. Typically, after approval of these submittals, a pre-construction meeting is held by the procurement department to collectively review these documents and address open issues.

Before any contractor employee is allowed to start work at the Laboratory, the contractor employee must attend the Contractor Safety Orientation and the Job Safety Orientation.

E. Contractor Safety Orientation

A 1.5 hour training class provided by the Laboratory four days per week at 7:30 a.m. There is no cost to the contractor for this training.

F. Job Safety Orientation

The contractor ES&H representative shall instruct each contractor employee on the details of the Job Safety Analysis for this work. Each contractor employee must read and sign the Job Safety Analysis and this document must be available at the job site at all times. Also, prior to starting work in some Laboratory buildings, the Contractor employees must attend a Building Orientation.

Other items that must be posted or available at the job site include MSDS sheets, DOE poster, emergency phone numbers, workers compensation notice, all permits and all approved hazard specific plans.

Prior to the use of tools, the Laboratory will conduct a tool and equipment inspection.

G. Tool Inspection

Upon arrival, the Laboratory will inspect contractor tools for compliance with OSHA, ANL, and other applicable requirements and industry standards. Unsatisfactory tools must be tagged out of service and removed from the ANL site at the end of the work shift.

As dictated by the scope of work and the mitigating actions necessary to address specific hazards, additional hazard specific plans or permits may be required. Examples of these include, but are not limited to:

H. Open Flame Permit
I. Electrical Hot Work Permit
J. Respiratory Protection Plan
K. Confined Space Entry Plan
L. Asbestos Abatement Plan
M. Work Entry Permit

N. Dig Permit
O. Coring Checklist
P. Fall Protection Plan
Q. Hoisting and Rigging Plan

The contractor shall work with the Laboratory in planning for, developing as needed, and obtaining approval of these plans and permits.

R. Laboratory Site Rules and Safety Requirements

The Laboratory enforces a series of site rules and requirements. Not unlike other large sites, the Laboratory specifies unacceptable contractor employee acts or conduct, and provides a listing of site safety requirements addressing areas of frequent violation and/or serious hazard potential.

S. In Case of Emergency

The contractor must immediately report all accidents and unauthorized releases to the environment. Follow-up actions such as written reporting of the incident along with corrective action is mandatory.

The Laboratory has a well established contractor safety program. Our goal is for work at the Laboratory to be free of incidents that threaten the environment, the safety and health of contractor and Laboratory employees and the public, or the safety of personal, contractor or Laboratory property.

ESH-224 (4/99)

Attachment 1

ES&H PROGRAM AND IMPLEMENTATION PLAN REVIEW GUIDE

Date of Contractor's Plan: _____ Date Reviewed: _____

Contractor: _____ Contract Number: _____

Job Number _____ Job Title: _____

Reviewer: _____

		REF	Aprvd	Not Aprvd	Not Req'd
I	CONTRACTOR'S ES&H POLICY STATEMENT				
	• Must be signed by a responsible company officer.				
II	CONTRACTOR'S ES&H ORGANIZATION				
	• Safety Representative				
	– Responsibilities				
	– Qualifications				
III	GENERAL SAFETY AND HEALTH PROVISIONS				
	• Safety training and education and awareness (Ref. Training Requirements in OSHA Standards and Training Guidelines, OSHA 2254)				
	• Orientation				
	– 1 ½ Construction Safety and Building Orientation				
	– Hazard Communication Program				
	– Job Safety analysis				
	• Recording and Reporting of Injuries				
	– OSHA 200 Log				
	– Doe Form				
	– ESH 197 Accident Forms				
	– Verbal to ANL CFR				
	• Housekeeping	1926.25			
	• Acceptable certification for pressure vessels, boilers, cranes and other equipment.	1926.29			
	• Employee involvement, free of retaliation				
	• Inspection plan				
	• Meetings				
	• Confined spaces	1926.21			
	• Training Certifications	1926.352,3			

• Permits					
• Temporary building and facilities					
• Submittals to the Laboratory					
IV OCCUPATIONAL HEALTH AND ENVIRONMENTAL CONTROLS					
• Medical services and first-aid [Ref. SC-1 (D)]	1926.50				
• Sanitation	1926.51				
• Occupational noise exposure	1926.52				
• Ionization radiation (X-rays, Nuclear Density, etc.)	1926.53				
• Nonionization radiation (Laser)	1926.54				
– Training					
– Operator qualifications					
• Gases, vapors, fumes, dusts and mist	1926.55				
• Illumination	1926.56				
• Ventilation	1926.57				
• Asbestos	1926.58				
• Hazard communication program	1926.59				
– Training					
– MSDS					
– Personal protective equipment					
– Labeling					
• Carcinogens					
V PERSONAL PROTECTIVE AND LIFE SAVING EQUIPMENT					
• Head protection	1926.100				
• Hearing protection	1926.101				
• Eye and face protection	1926.102				
• Foot protection					
• Hand protection					
• Protection of other body parts					
• Respiratory protection	1926.103				
• Safety belts, lifelines and lanyards	1926.104				
• Safety nets	1926.105				
• Minimum dress requirements					
VI FIRE PROTECTION AND PREVENTION					
• Protection	1926.150				
• Prevention	1926.151				
• Flammable and combustible liquids	1926.153				
• Liquified petroleum gas (LPG)	1926.154				
• Temporary heating devices	1926.154				
• Fire extinguishers	1926.150				

VII	SIGNS, SIGNALS, FLAGGING AND BARRICADES					
	• Accident prevention signs and tags	1926.200				
	• Signals	1926.201				
	– Lab sirens/horns					
	• Flagging					
	• Barricades	1926.200				
	• Existing Laboratory postings					
VIII	MATERIALS HANDLING, STORAGE, USE AND DISPOSAL					
	• General requirements for storage	1926.250				
	• Rigging equipment for material handling	1926.251				
	• Disposal of waste material					
	• Fork Lifts and attachments					
IX	TOOLS - HAND AND POWER					
	• General requirements	1926.300				
	• Hand tools	1926.301				
	• Power operated tools - guards	1926.302				
	• Abrasive wheels and tools	1926.303				
	• Woodworking tools	1926.304				
	• Jacks, lever and ratchet, screw and hydraulic	1906.305				
X	WELDING AND CUTTING					
	• Gas welding and cutting	1926.350				
	• Arc welding and cutting	1926.351				
	• Fire prevention and fire watch	1926.352				
	• Ventilation and protection in welding, cutting and heating	1926.353				
	• Lead abatement, chemical stripping, HEPA exhaust					
	• Welding, cutting and heating in way of preservative coating	1926.354				
	• Permits					
XI	ELECTRICAL					
	• Wiring design and protection	1926.404				
	– GFCI Required					
	• Wiring methods, components and equipment for general use	1926.405				
	• Specific purpose equipment and installation	1926.406				
	• Hazardous (classified) locations	1926.407				
	• Special systems	1926.408				
	• Lockout and tagging of circuits and energized sources	1926.417				
	• Verifying of circuits and energized sources					
	• Maintenance of equipment	1926.431				
	• Environmental deterioration of equipment	1926.432				
	• Battery location and battery charging	1926.441				
	• Permits					

	• Hot work - CPR trained safety watch					
XII	LADDERS AND SCAFFOLDS					
	• Ladders (Metal ladders are prohibited)	1926.450				
	• Scaffolds - Competent person requirements	1926.451				
	• Pickboards					
XIII	FLOORS AND WALL OPENINGS AND STAIRWAYS					
	• Guardrails, handrails and covers	1926.500				
	• Stairways	1926.501				
XIV	CRANES, DERRICKS, HOIST, ELEVATORS AND CONVEYORS					
	• plans	1926.550				
	• Material hoists, personnel hoists and elevators	1926.552				
	• Base-mounted drum hoists	1926.553				
	• Overhead hoists	1926.554				
	• Conveyors	1926.555				
	• Aerial lifts	1926.556				
	• Backup alarms					
	• Certifications for annual inspections					
	• Operation certification and physical requirements					
XV	MOTOR VEHICLES, MECHANIZED EQUIPMENT AND MARINE OPERATIONS					
	• Equipment	1926.600				
	• Motor vehicles	1926.601				
	• Material handling equipment	1926.602				
	• Pile driving equipment	1926.603				
	• Site clearing	1926.604				
	• Marine operations and equipment	1926.605				
	• Operation certification and physical requirements					
	• Backup alarms					
XVI	EXCAVATIONS, TRENCHING AND SHORING					
	• General protection requirements	1926.650				
	– Competent person/Qualifications					
	• Specific excavation requirements	1926.651				
	• Specific trenching requirements	1926.652				
	• Permits					
	• Confined space provisions	1926.21				
	• Fencing					
XVII	CONCRETE AND MASONRY					
	• General requirements	1926.701				
	• Requirements for equipment and tools	1926.702				
	• Requirements for cast-in-place concrete	1926.703				
	• Requirements for precast concrete	1926.704				

	• Requirements for lift-slab operations	1926.705				
	• Requirements for masonry construction	1926.706				
	• Requirements for saw cutting					
XVIII	STEEL ERECTION					
	• Flooring requirements	1926.750				
	• Structural steel assembly	1926.751				
	• Bolting, riveting, fitting-up and plumbing-up	1926.752				
	• Fall protection plans	1926.104				
	• Crane use - lift plans	1926.105				
XIX	UNDERGROUND CONSTRUCTIONS, CAISSON, COFFERDAMS, AIR COMPRESSORS					
	• Underground construction	1926.800				
	• Caissons	1926.801				
	• Cofferdams	1926.802				
	• Compressed air	1926.803				
	• Confined space provisions	1926.21				
XX	DEMOLITION					
	• Preparatory operations	1926.850				
	• Stairs, passageways, and ladders	1926.851				
	• Chutes	1926.852				
	• Removal of material through floor openings	1926.853				
	• Removal of walls, masonry sections and chimneys	1926.854				
	• Manual removal of floors	1926.855				
	• Removal of walls, floors, and material with equipment	1926.856				
	• Storage	1926.857				
	• Removal of steel construction	1926.858				
	• Mechanical demolition	1926.859				
	• Asbestos removal					
	• Lead base painted surfaces					
	• Lockout/Tagout procedures					
	• Fencing/signage					
XXI	BLASTING AND USE OF EXPLOSIVES					
	• Not allowed					
XXII	POWER TRANSMISSIONS AND DISTRIBUTION					
	• General requirements	1926.950				
	• Tools and protective equipment	1926.951				
	• Mechanical equipment	1926.953				
	• Material handling	1926.953				
	• Grounding for protective equipment	1926.954				
	• Overhead lines	1926.955				
	• Underground lines	1926.956				

	• Construction in energized stations	1926.957				
	• External load helicopters	1926.958				
	• Lineman's body belts, safety straps and lanyards	1926.959				
XXIII	ROLLOVER PROTECTIVE STRUCTURES; OVERHEAD PROTECTION					
	• Rollover protective structures (ROPS)	1926.1000				
	• Minimum performance criteria for rollover protective structures for designated scrapers, loaders, dozers, grades and crawler tractors	1926.1001				
	• Protective frame (ROPS) test procedures and performance requirements for wheel-type agricultures and industrial tractors used in construction	1926.1002				
XXIV	ENERGIZED SYSTEMS (PIPING, HVAC, ELECTRICAL, ETC.)					
	• Lockout and Tagout procedures					
XXV	ENVIRONMENTAL PROGRAM					
XXVI	DRUG FREE WORK PLACE					
XXVII	DISCIPLINARY PROGRAM					
XXVIII	JOB SAFETY ANALYSIS REQUIREMENTS AND PROVISIONS					
	• Safety Representative: Name and qualifications					
	• Location of "Occupational Safety and Health Protection Poster" (Form DOE F-5480.1) and complaint forms.					
	• Emergency telephone numbers					
	• Hazards addressed in Special Conditions of the Specifications					

The contractor's ES&H Program and Implementation Plan dated _____ has been:

_____ Approved _____ Approved as Noted _____ Not Approved; Resubmitted

ESH-CS Representative

Project Manager

ESH-IH Representative

ESH-HP Representative

EMO Representative

ESH-209C (9-99)

Construction Job Safety Analysis

Attachment 2

This form is to be completed by the contractor and submitted to the Project Manager for approval prior to work commencement. In addition this form is to be maintained at the job site where work is being performed.

Job Title: _____

Contract Number: _____ **Building/Area:** _____

CONTRACTOR		**ANL**	
Contractor:		**Project Manager:**	
Project Manager:		**Phone:**	
Phone No:		**Construction Safety:**	
Foreman:		**Phone**:	**Page:**
Phone No:	**Page:**	**C.F.R.**	
ESH Rep.		**Phone**:	**Page:**
Phone No.:	**Page:**	**Other:**	

DESIGNATED COMPETENT PERSON

Excavation: _____
(29CFR:1926.650)

Confined Space: _____
29CFR:1926.21)

Scaffolding: _____
(29CFR:1926.451)

ESH Approvals

☐ **Approved**

☐ **Approved as Noted**

☐ **Not Approved - Resubmit**

_____ **Date:** _____
ESH-EC

_____ **Date:** _____
ESH-CS

- The contractor ESH Representative must hold an Orientation with all employees prior to work identifying the hazards related to their Scope of Work and have each person sign the signature sheet attached.
- Identify location of **Emergency Telephones** and designated **Tornado Shelters** in relationship to the work site and provide phone numbers**: Laboratory Phone - 911, Cellular - 630-252-1911.**
- Emphasize compliance with **OSHA 29CFR:1926**.
- Utilizing the format on attached pages, identify hazards and safety precautions/procedures to mitigate hazards.

Phase of Work	Safety Hazard	Precautions/Safety Procedures

Material Safety Data Sheets (MSDS)

Hazardous materials used on this site are:

1. _____ 3. _____ 5. _____
2. _____ 4. _____ 6. _____

Location of MSDS:

1. _____ 3. _____ 5. _____
2. _____ 4. _____ 6. _____

Review of Emergency Routes and Assembly Point:

Basic Information

* _____
* _____
* _____

*Use separate sheets as necessary.

Basic Safety Rule Reminders:

1. Safety hat and safety glasses with side shields required as a minimum.
2. Inspect all tools and equipment for OSHA compliance before use.
3. Fall protection required when working heights above 6 feet when handrail or other fall protection is not provided.
4. Flag work areas and post warning signs.
5. Ground fault circuit interrupters (GFCI's) are required on all 110 and 120 volt receptacles.
6. Stairways, passageways, and access ways must be kept free of materials and equipment.
7. Orderly housekeeping shall be maintained.
8. Report all injuries/illnesses and near misses.
9. Metal ladders are prohibited.
10. **NO DUMPING OF ANY KIND SHALL BE PERFORMED ON SITE WITHOUT USE OF A QUALIFIED AND COMPETENT SPOTTER.**

Signature Sheet

Contractor: _____ Building/Area: _____

Contract Number: _____ Job Title: _____

Superintendent: _____ Company (not ANL) ES&H Rep: _____

The ESH representative is responsible to see that all truck drivers receive first hand instruction to alert them to all hazards, particularly aerial hazards.

All trucks must lower their beds before driving away after dumping their loads.

This instruction to the drivers may be communicated by any of the contractors personnel, but the ESH Rep is the responsible person to see that this information is properly conveyed to the drivers.

A SPOTTER IS REQUIRED FOR <u>ALL</u> DUMPING OPERATIONS IN ORDER TO AVOID DAMAGE TO ANL PROPERTY.

ES&H information relative to this job has been reviewed with me by my company ES&H representative.

Name (please print)	Badge No.	Signature	Date

Note: Contractor representative will provide a copy of this sheet with initial signatures and all added signatures to the ANL Construction Field Representative daily.